

I claim:

1. A cable coupler on a welder housing or wire feeder for conveniently connecting a cable to said welding housing or wire feeder comprising a coupler having a coupling jacket which includes an electrical coupling cavity having a plurality of electrical connectors positioned therein and a coupling sleeve rotatably positioned at least partially about said coupling jacket, said coupling
5 jacket sized and shaped to be at least partially telescopically received in a cable connection sleeve of said cable, said plurality of electrical connectors in said coupling cavity adapted to be electrically connected to corresponding electrical connectors in said cable connection sleeve when said coupling jacket is at least partially telescopically received in said cable connection sleeve, said coupling sleeve including a joining cavity having at least one thread, said joining cavity designed to at least partially
10 engage an outer threaded surface of said cable connection sleeve after a majority of said electrical coupling cavity is at least partially telescopically inserted in said cable connection sleeve.

2. The cable coupler as defined in claim 1, wherein said coupling jacket includes an orientation guide designed to at least partially guide said coupling jacket a certain orientation into said cable coupling sleeve.

3. The cable coupler as defined in claim 1, wherein said coupling sleeve includes a plurality of gripping members to facilitate in the rotation of said coupling sleeve on said coupling jacket.

4. The cable coupler as defined in claim 2, wherein said coupling sleeve includes a plurality of gripping members to facilitate in the rotation of said coupling sleeve on said coupling jacket.

5. The cable coupler as defined in claim 3, wherein said plurality of gripping members on said coupling sleeve includes a plurality of nodes.

6. The cable coupler as defined in claim 5, wherein said plurality of nodes are substantially symmetrically oriented on said coupling sleeve to form a generally star-shape configuration.

7. The cable coupler as defined in claim 1, wherein said at least one thread in said joining cavity of said coupling sleeve is spaced from a receiving end of said joining cavity.

8. The cable coupler as defined in claim 4, wherein said at least one thread in said joining cavity of said coupling sleeve is spaced from a receiving end of said joining cavity.

9. The cable coupler as defined in claim 7, wherein said receiving end of said joining cavity has a beveled surfaced designed to receive a front end of said cable connection sleeve.

10. The cable coupler as defined in claim 8, wherein said receiving end of said joining cavity has a beveled surfaced designed to receive a front end of said cable connection sleeve.

11. The cable coupler as defined in claim 7, wherein at least majority of said electrical coupling cavity extending outwardly from said receiving end of said joining cavity.

12. The cable coupler as defined in claim 9, wherein at least majority of said electrical coupling cavity extending outwardly from said receiving end of said joining cavity.

13. The cable coupler as defined in claim 10, wherein at least majority of said electrical coupling cavity extending outwardly from said receiving end of said joining cavity.

14. The cable coupler as defined in claim 1, wherein said coupling jacket is substantially rigidly secured to a mounting plate that is designed to be secured to the welder housing or wire feeder, said mounting plate including a plate cavity adapted to at least partially telescopically receive

a rear portion of said coupling jacket.

15. The cable coupler as defined in claim 13, wherein said coupling jacket is substantially rigidly secured to a mounting plate that is adapted to be secured to the welder housing or wire feeder, said mounting plate including a plate cavity designed to at least partially telescopically receive a rear portion of said coupling jacket.

16. The cable coupler as defined in claim 14, wherein said coupling jacket includes a retention member to limit movement of said coupling sleeve along a longitudinal axis of said coupling jacket.

17. The cable coupler as defined in claim 15, wherein said coupling jacket includes a retention member to limit movement of said coupling sleeve along a longitudinal axis of said coupling jacket.

18. The cable coupler as defined in claim 14, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket when said coupling jacket is at least partially positioned in said plate cavity, said anti-rotation member inhibiting movement of said coupling jacket in said plate cavity.

19. The cable coupler as defined in claim 16, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket when said coupling jacket is at least partially positioned in said plate cavity, said anti-rotation member inhibiting movement of said coupling jacket in said plate cavity.

20. The cable coupler as defined in claim 17, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket when said coupling jacket is at least partially positioned in said plate cavity, said anti-rotation member inhibiting movement of said coupling

jacket in said plate cavity.

21. A cable coupler on a welder housing or wire feeder for conveniently connecting a cable to said welding housing or wire feeder comprising a coupler having coupling jacket which includes an electrical coupling cavity having at least one electrical connector positioned therein and a coupling sleeve rotatably positioned at least partially about said coupling jacket, said coupling
5 jacket adapted to be at least partially telescopically received in a cable connection sleeve of said cable, said electrical connector in said coupling cavity designed to be electrically connected to a corresponding electrical connector in said cable connection sleeve when said coupling jacket is at least partially telescopically received in said cable connection sleeve, said coupling sleeve including
10 joining cavity having a connection member adapted to at least partially engage an outer surface of said cable connection sleeve after said electrical coupling cavity is at least partially telescopically inserted in said cable connection sleeve and said electrical connector in said coupling cavity is at least partially electrically connected to the corresponding electrical connector in said cable connection sleeve.

22. The cable coupler as defined in claim 21, wherein said electrical coupling cavity includes a plurality of electrical connectors.

23. The cable coupler as defined in claim 21, wherein said connection member includes at least one thread.

24. The cable coupler as defined in claim 22, wherein said connection member includes at least one thread.

25. The cable coupler as defined in claim 21, wherein said coupling sleeve is oriented on said coupling jacket to enable at least a majority of said electrical coupling cavity to be telescopically inserted in said cable connection sleeve prior to said connection member at least partially engaging

the outer surface of said cable connection sleeve.

26. The cable coupler as defined in claim 24, wherein said coupling sleeve is oriented on said coupling jacket to enable at least a majority of said electrical coupling cavity to be telescopically inserted in said cable connection sleeve prior to said connection member at least partially engaging the outer surface of said cable connection sleeve.

27. The cable coupler as defined in claim 21, wherein said coupling jacket includes an orientation guide designed to at least partially guide said coupling jacket a certain orientation into said cable coupling sleeve.

28. The cable coupler as defined in claim 26, wherein said coupling jacket includes an orientation guide designed to at least partially guide said coupling jacket a certain orientation into said cable coupling sleeve.

29. The cable coupler as defined in claim 21, wherein said coupling sleeve includes a plurality of gripping members to facilitate in the rotation of said coupling sleeve on said coupling jacket.

30. The cable coupler as defined in claim 28, wherein said coupling sleeve includes a plurality of gripping members to facilitate in the rotation of said coupling sleeve on said coupling jacket.

31. The cable coupler as defined in claim 29, wherein said plurality of gripping members on said coupling sleeve includes a plurality of nodes substantially symmetrically oriented on said coupling sleeve to form a generally star-shape configuration.

32. The cable coupler as defined in claim 21, wherein said connection member being

spaced from a receiving end of said joining cavity.

33. The cable coupler as defined in claim 30, wherein said connection member being spaced from a receiving end of said joining cavity.

34. The cable coupler as defined in claim 32, wherein said receiving end of said joining cavity has a beveled surfaced designed to receive a front end of said cable connection sleeve.

35. The cable coupler as defined in claim 33, wherein said receiving end of said joining cavity has a beveled surfaced designed to receive a front end of said cable connection sleeve.

36. The cable coupler as defined in claim 32, wherein at least majority of said coupling cavity extending outwardly from said receiving end of said joining cavity.

37. The cable coupler as defined in claim 35, wherein at least majority of said coupling cavity extending outwardly from said receiving end of said joining cavity.

38. The cable coupler as defined in claim 21, wherein said coupling jacket is substantially rigidly secured to a mounting plate that is designed to be secured to the welder housing or wire feeder, said mounting plate including a plate cavity designed to at least partially telescopically receive a rear portion of said coupling jacket.

39. The cable coupler as defined in claim 37, wherein said coupling jacket is substantially rigidly secured to a mounting plate that is designed to be secured to the welder housing or wire feeder, said mounting plate including a plate cavity designed to at least partially telescopically receive a rear portion of said coupling jacket.

40. The cable coupler as defined in claim 38, wherein said coupling jacket includes a

retention member to limit movement of said coupling sleeve along a longitudinal axis of said coupling jacket.

41. The cable coupler as defined in claim 39, wherein said coupling jacket includes a retention member to limit movement of said coupling sleeve along a longitudinal axis of said coupling jacket.

42. The cable coupler as defined in claim 38, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket when said coupling jacket is at least partially positioned in said plate cavity, said anti-rotation member inhibiting movement of said coupling jacket in said plate cavity.

43. The cable coupler as defined in claim 41, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket when said coupling jacket is at least partially positioned in said plate cavity, said anti-rotation member inhibiting movement of said coupling jacket in said plate cavity.

44. A method of conveniently connecting a cable to a welding housing or wire feeder comprising:

- a. providing a cable having a cable connection sleeve and at least one connector at least partially positioned therein, said cable connection sleeve including a connection member;
- b. providing a welder or wire feeder having a mounting plate secured thereto;
- c. providing a coupler secured in a plate cavity of said mounting plate, said coupler having a coupling jacket that includes at least one connector at least partially positioned therein and a coupling sleeve rotatably positioned at least partially about said coupling jacket, said coupling sleeve including a joining cavity having a connection member;
- d. at least partially inserting said cable connection sleeve about said coupling jacket until said at least one connector of said cable connection sleeve is at least partially connected to said at

least one connector of said coupling jacket;

e. moving said coupling sleeve axially along a longitudinal axis of said coupling jacket until said joining cavity in said coupling sleeve at least partially telescopically receives said cable connection sleeve and said connection member of said cable connection sleeve and said joining cavity at least partially engage; and,

f. rotating said coupling sleeve until said connection member of said cable connection sleeve and said joining cavity are at least partially secured together.

45. The method as defined in claim 44, wherein said at least one connector of said cable connection sleeve and said at least one connector of said coupling jacket are electrical connectors.

46. The method as defined in claim 45, wherein said cable connection sleeve and said coupling jacket include a plurality of electrical connectors.

47. The method as defined in claim 44, wherein at least a majority of said cable connection sleeve is inserted about said coupling jacket prior to said moving of to cause joining cavity to at least partially telescopically receive said cable connection sleeve.

48. The method as defined in claim 46, wherein at least a majority of said cable connection sleeve is inserted about said coupling jacket prior to said moving of to cause joining cavity to at least partially telescopically receive said cable connection sleeve.

49. The method as defined in claim 44, wherein a receiving end of said joining cavity has a beveled surfaced adapted to receive a front end of said cable connection sleeve, said connection member of said joining cavity positioned rearwardly of said beveled surface.

50. The method as defined in claim 48, wherein a receiving end of said joining cavity has a beveled surfaced adapted to receive a front end of said cable connection sleeve, said connection

member of said joining cavity positioned rearwardly of said beveled surface.

51. The method as defined in claim 44, wherein said connection member of said cable connection sleeve and said joining cavity includes at least one thread.

52. The method as defined in claim 50, wherein said connection member of said cable connection sleeve and said joining cavity includes at least one thread.

53. The method as defined in claim 44, said coupling jacket includes an orientation guide to guide said coupling jacket a certain orientation relative to said cable coupling sleeve as said cable connection sleeve is at least partially inserted about said coupling jacket.

54. The method as defined in claim 52, said coupling jacket includes an orientation guide to guide said coupling jacket a certain orientation relative to said cable coupling sleeve as said cable connection sleeve is at least partially inserted about said coupling jacket.

55. The method as defined in claim 44, wherein said coupling sleeve includes a plurality of gripping members to facilitate in the rotation of said coupling sleeve on said coupling jacket.

56. The method as defined in claim 54, wherein said coupling sleeve includes a plurality of gripping members to facilitate in the rotation of said coupling sleeve on said coupling jacket.

57. The method as defined in claim 55, wherein said plurality of gripping members on said coupling sleeve includes a plurality of nodes substantially symmetrically oriented on said coupling sleeve to form a generally star-shape configuration.

58. The method as defined in claim 44, wherein said coupling jacket is substantially rigidly secured to said mounting plate, said mounting plate including a plate cavity adapted to at least

partially telescopically receive a rear portion of said coupling jacket.

59. The method as defined in claim 56, wherein said coupling jacket is substantially rigidly secured to said mounting plate, said mounting plate including a plate cavity adapted to at least partially telescopically receive a rear portion of said coupling jacket.

60. The method as defined in claim 44, wherein said coupling jacket includes a retention member to limit movement of said coupling sleeve along a longitudinal axis of said coupling jacket between said retention member and mounting plate.

61. The method as defined in claim 59, wherein said coupling jacket includes a retention member to limit movement of said coupling sleeve along a longitudinal axis of said coupling jacket between said retention member and mounting plate.

62. The method as defined in claim 44, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket to inhibit movement of said coupling jacket relative to said mounting plate.

63. The method as defined in claim 61, wherein said mounting plate includes an anti-rotation member that engages said coupling jacket to inhibit movement of said coupling jacket relative to said mounting plate.